

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:**1.-45. (Canceled)****46. (New) A protein complex comprising:**

- (a) at least one first protein selected from the group consisting of:
 - (i) "ANDROGEN RECEPTOR" (SEQ ID No:1), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "ANDROGEN RECEPTOR" encoded by a nucleic acid that hybridizes to the "ANDROGEN RECEPTOR" nucleic acid or its complement under low stringency conditions;
 - (ii) "Actin" (SEQ ID No:2), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "Actin" encoded by a nucleic acid that hybridizes to the "Actin" nucleic acid or its complement under low stringency conditions;
 - (iii) "BAF53" (SEQ ID No:3), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "BAF53" encoded by a nucleic acid that hybridizes to the "BAF53" nucleic acid or its complement under low stringency conditions;
 - (iv) "ECP-51" (SEQ ID No:6), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "ECP-51" encoded by a nucleic acid that hybridizes to the "ECP-51" nucleic acid or its complement under low stringency conditions;
 - (v) "HDAC1" (SEQ ID No:10), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "HDAC1" encoded by a nucleic acid that hybridizes to the

- "HDAC1" nucleic acid or its complement under low stringency conditions;
- (vi) "PAF400/TRRAP" (SEQ ID No:12), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "PAF400/TRRAP" encoded by a nucleic acid that hybridizes to the "PAF400/TRRAP" nucleic acid or its complement under low stringency conditions;
- (vii) "RUVBL1/ECP-54 (Pontin)" (SEQ ID No:14), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "RUVBL1/ECP-54 (Pontin)" encoded by a nucleic acid that hybridizes to the "RUVBL1/ECP-54 (Pontin)" nucleic acid or its complement under low stringency conditions; and
- (viii) "TIP60" (SEQ ID No:17), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "TIP60" encoded by a nucleic acid that hybridizes to the "TIP60" nucleic acid or its complement under low stringency conditions;
- and
- (b) at least one second protein, which second protein is selected from the group consisting of:
- (i) "C20orf20" (SEQ ID No:4), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "C20orf20" encoded by a nucleic acid that hybridizes to the "C20orf20" nucleic acid or its complement under low stringency conditions;
 - (ii) "DMAP1" (SEQ ID No:5), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "DMAP1" encoded by a nucleic acid that hybridizes to the "DMAP1" nucleic acid or its complement under low stringency conditions;
 - (iii) "EP400: E1A binding protein p400" (SEQ ID No:7), a functionally active derivative thereof, a functionally active fragment thereof, a

- homolog thereof, or a variant of "EP400: E1A binding protein p400" encoded by a nucleic acid that hybridizes to the "EP400: E1A binding protein p400" nucleic acid or its complement under low stringency conditions;
- (iv) "EPC1" (SEQ ID No:8), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "EPC1" encoded by a nucleic acid that hybridizes to the "EPC1" nucleic acid or its complement under low stringency conditions;
- (v) "GAS41 (glioma-amplified sequence-41)" (SEQ ID No:9), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "GAS41 (glioma-amplified sequence-41)" encoded by a nucleic acid that hybridizes to the "GAS41 (glioma-amplified sequence-41)" nucleic acid or its complement under low stringency conditions;
- (vi) "KIAA1093 (Fragment)" (SEQ ID No:11), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "KIAA1093 (Fragment)" encoded by a nucleic acid that hybridizes to the "KIAA1093 (Fragment)" nucleic acid or its complement under low stringency conditions;
- (vii) "RBM14" (SEQ ID No:13), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "RBM14" encoded by a nucleic acid that hybridizes to the "RBM14" nucleic acid or its complement under low stringency conditions;
- (viii) "SWI/SNF COMPLEX 60 KDA SUBUNIT" (SEQ ID No:15), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "SWI/SNF COMPLEX 60 KDA SUBUNIT" encoded by a nucleic acid that hybridizes to the "SWI/SNF COMPLEX 60 KDA SUBUNIT" nucleic acid or its complement under low stringency conditions;
- (ix) "THR coactivating protein" (SEQ ID No:16), a functionally active derivative thereof, a functionally active fragment thereof, a homolog

thereof, or a variant of "THR coactivating protein" encoded by a nucleic acid that hybridizes to the "THR coactivating protein" nucleic acid or its complement under low stringency conditions; and

- (x) "YL-1" (SEQ ID No:18), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "YL-1" encoded by a nucleic acid that hybridizes to the "YL-1" nucleic acid or its complement under low stringency conditions,

wherein the low stringency conditions comprise (a) hybridization in a buffer comprising about 35% formamide, about 5X SSC, about 50 mM Tris-HCl (about pH 7.5), about 5 mM EDTA, about 0.02% PVP, about 0.02% Ficoll, about 0.2% BSA, about 100 µg/ml denatured salmon sperm DNA, and about 10% (wt/vol) dextran sulfate for about 18 to about 20 hours at about 40 Celsius, (b) washing in a buffer consisting of about 2X SSC, about 25 mM Tris-HCl (about pH 7.4), about 5 mM EDTA, and about 0.1 % SDS for about 1.5 hours at about 55 Celsius, and (c) washing in a buffer consisting of about 2X SSC, about 25 mM Tris-HCl (about pH 7.4), about 5 mM EDTA, and about 0.1% SDS for about 1.5 hours at about 60 Celsius.

47. (New) The protein complex of claim 46, comprising at least two of the second proteins.

48. (New) The protein complex of claim 46, wherein the second protein is selected from the group consisting of C20orf20 and KIAA1093.

49. (New) A method for screening for a molecule that binds either to the protein complex of Claim 46 or to any of its protein components, preferably to:

- (a) "C20orf20" (SEQ ID No:4), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "C20orf20" encoded by a nucleic acid that hybridizes to the "C20orf20" nucleic acid or its complement under low stringency conditions, or to
- (b) "KIAA1093 (Fragment)" (SEQ ID No:11), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "KIAA1093 (Fragment)" encoded by a nucleic acid that hybridizes to the

"KIAA1093 (Fragment)" nucleic acid or its complement under low stringency conditions,

wherein the low stringency conditions comprise (a) hybridization in a buffer comprising about 35% formamide, about 5X SSC, about 50 mM Tris-HCl (about pH 7.5), about 5 mM EDTA, about 0.02% PVP, about 0.02% Ficoll, about 0.2% BSA, about 100 µg/ml denatured salmon sperm DNA, and about 10% (wt/vol) dextran sulfate for about 18 to about 20 hours at about 40 Celsius, (b) washing in a buffer consisting of about 2X SSC, about 25 mM Tris-HCl (about pH 7.4), about 5 mM EDTA, and about 0.1 % SDS for about 1.5 hours at about 55 Celsius, and (c) washing in a buffer consisting of about 2X SSC, about 25 mM Tris-HCl (about pH 7.4), about 5 mM EDTA, and about 0.1% SDS for about 1.5 hours at about 60 Celsius;

the method comprising the steps of:

- (a) exposing the complex or protein component, or a cell or organism containing the complex or protein component, to one or more candidate molecules; and
- (b) determining whether the candidate molecule is bound to the complex or protein component.

50. (New) The method of claim 49, wherein the method is for screening for a molecule that modulates directly or indirectly the function, activity, composition, or formation of the complex or protein component.

51. (New) The method of claim 49, wherein the determining step comprises:

- (a) isolating from the cell or organism the complex or protein component to produce the isolated complex or protein component;
- (b) contacting the isolated complex in the presence or absence of a candidate molecule with a substrate of the complex or protein component; and
- (c) determining whether the processing of the substrate is modified in the presence of the candidate molecule.

52. (New) The method of claim 49, wherein the method is a method of screening for a drug for treatment or prevention of a disease or disorder such as neurodegenerative diseases such as Alzheimer's disease.

53. (New) The method of claim 50, wherein the method is for screening of a molecule modulating the apoptotic activity of the complex or the influence of the protein on the apoptotic activity of the complex.

54. (New) The method of claim 50, further comprising mixing the identified molecule with a pharmaceutically acceptable carrier.

55. (New) A method for treating or preventing a disease or disorder characterized by an aberrant amount, activity, component composition, or activity of the protein complex of Claim 1 or of any of its protein components, preferably of:

- (a) "C20orf20" (SEQ ID No:4), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "C20orf20" encoded by a nucleic acid that hybridizes to the "C20orf20" nucleic acid or its complement under low stringency conditions; or to
- (b) "KIAA1093 (Fragment)" (SEQ ID No:11), a functionally active derivative thereof, a functionally active fragment thereof, a homolog thereof, or a variant of "KIAA1093 (Fragment)" encoded by a nucleic acid that hybridizes to the "KIAA1093 (Fragment)" nucleic acid or its complement under low stringency conditions,

wherein the low stringency conditions comprise (a) hybridization in a buffer comprising about 35% formamide, about 5X SSC, about 50 mM Tris-HCl (about pH 7.5), about 5 mM EDTA, about 0.02% PVP, about 0.02% Ficoll, about 0.2% BSA, about 100 µg/ml denatured salmon sperm DNA, and about 10% (wt/vol) dextran sulfate for about 18 to about 20 hours at about 40 Celsius, (b) washing in a buffer consisting of about 2X SSC, about 25 mM Tris-HCl (about pH 7.4), about 5 mM EDTA, and about 0.1 % SDS for about 1.5 hours at about 55 Celsius, and (c) washing in a buffer consisting of about 2X SSC, about 25 mM Tris-HCl (about pH 7.4), about 5 mM EDTA, and about 0.1% SDS for about 1.5 hours at about 60 Celsius;

the method comprising administering to a subject in need of such treatment or prevention a therapeutically effective amount of one or more molecules that modulate either directly or indirectly the function, activity, the apoptotic activity, composition, or formation of the complex, or of a protein component of the complex, or the influence of the protein component on the apoptotic activity of the complex.

56. (New) The method according to Claim 55, wherein the disease or disorder is Alzheimer's disease.